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Abstract

ORGANIC MODERATED NUCLEAR POWER PLANT

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The 750 kW(e) nuclear power plant for use in remote, difficult--to-reach areas is considered.

The discription of the plant is given in the report. It cosists of sepa rate modules (each weighing up to 20 tons), their mounting takes two or three months. An organic fluid (hydrostabilized gas oil) is used as a coolant and moderator.

The reactor and fuel elements are described.

The reactor and the primary circuit equipment are made of carbon steel. There is no biological shielding at the plant(except the reactor).

A system for coolant regeneration is described.

The reactor start-up and the nuclear power plant operation at loads are described.

The nuclear power plant was brought to 100% power on August 11, 1963.

Some information on plant test operation is presented. The results are in a perfect agreement with design criteria.

It is shown that the successful operation of the plant permits construction of more powerful stations with an organic cooled and moderated reactor.

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